

REMARKS

This Response is submitted in reply to the Office Action dated August 24, 2007. Claims 10-20 are currently pending. Claims 10 and 20 are in independent form. Claims 10 and 20 are hereby amended. No new matter has been added by these amendments. Enclosed is a Two-Month Extension of Time to reply to the Office Action. Please charge deposit account 02-1818 for all fees due in connection with this Response.

The Office Action rejected claims 10-13 and 15-20 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,790,516 to Gudmundson et al. ("Gudmundson") in view of U.S. Patent No. 6,463,105 to Ramesh ("Ramesh"). The Office Action rejected claim 14 under 35 U.S.C. § 103(a) as being unpatentable over Gudmundson in view of Ramesh and further in view of U.S. Patent No. 4,513,385 to Muri ("Muri"). In light of the claim amendments made herein, Applicants respectfully disagree with, and traverses, such rejections.

Amended independent claim 10 recites, among other elements, "performing, on a send side and depending on the transmission channel characteristic, an adaptive pre-emphasis of a send signal for a part of the carrier frequencies of the at least one sub-carrier band, the part of the carrier frequencies being a subset of the at least one sub-carrier band; and providing that the adaptive pre-emphasis relates only to the part of the carrier frequencies of the at least one sub-carrier band."

Amended independent claim 20 recites, among other elements, "parts for pre-emphasis of a certain part of the carrier frequencies of the at least one sub-carrier frequency of a send signal, which is adaptively performed depending on the transmission channel characteristic such that the pre-emphasis relates only to the certain part of the carrier frequencies of the at least one sub-carrier band, the certain part of the carrier frequencies being a subset of the at least one sub-carrier band." Gudmundson and/or Ramesh fail to teach the foregoing claimed elements at least for the following reasons.

Regarding independent claim 10, the Office Action states that Gudmundson discloses "performing, on a send side, an adaptive pre-emphasis of a send signal for a

part of the carrier frequencies of the at least one sub-carrier band (see col. 1 lines 9-13, col. 3 lines 65-67, col. 4 lines 1-5, col. 4 lines 15-22 . . .)” Regarding independent claim 20, the Office Action states that Gudmundson discloses “parts for pre-emphasis of a certain part of the carrier frequencies of the at least one sub-carrier frequency of a signal, which is adaptively performed such that the pre-emphasis related only to the certain part of the carrier frequencies of the at least one sub-carrier band (see the abstract, col. 3 lines 20-36, 44-67, col. 4 lines 30-40 . . .)

However, in Gudmundson, pulse shaping is performed for all of the carrier frequencies, not part of the carrier frequencies. For example, Gudmundson discloses “[i]n the invention each of a plurality of data symbols . . . are modulated onto one of a plurality of subcarriers to generate a plurality of modulated subcarriers that comprise an OFDM data signal. The composite OFDM data signal is then multiplied by a pulseshaping function before being transmitted on a system carrier over a system channel.” (Gudmundson, Column 4, Lines 16-22.) In other words, in Gudmundson, all of the subcarriers of a given bandwidth are subject to pulse shaping. The pulse shaping disclosed in Gudmundson does not teach the claimed pre-emphasis for a part of the carrier frequencies of the sub-carrier band, which has the advantage of saving power and processing resources. Thus, Applicants submit that the pulse shaping in Gudmundson does not disclose the claimed pre-emphasis for a part of the carrier frequencies of the sub-carrier band.

In addition, regarding independent claims 10 and 20, the Office Action states that “Gudmundson does not specifically show current transmission characteristics.” The Office Action states that Ramesh discloses “current transmission characteristics” and that “it would have been obvious . . . to modify Gudmundson teaching, and have current transmission characteristics, taught by Ramesh, to improve method and system for channel estimation”

However, Gudmundson does not disclose: a) current transmission characteristics, as stated in the Office Action; and b) pre-emphasis depending upon any monitored characteristic. Even if Ramesh would disclose current transmission characteristics, Ramesh does not disclose: a) a pre-emphasis of any send signal; and

b) pre-emphasis depending upon any monitored characteristic. The claimed pre-emphasis for a part of a carrier frequency depending on a transmission channel characteristic increases the advantage of saving power and processing resources. Therefore, Applicants submit that Gudmundson and/or Ramesh do not disclose the claimed adaptive pre-emphasis of a signal depending on a transmission channel characteristic.

All of the other pending claims depend directly or indirectly from independent claim 10. Therefore, for at least the reasons stated above, Applicants submit that all of the claims are in condition for allowance.

An earnest endeavor has been made to place this application in condition for formal allowance, and in the absence of more pertinent art such action is courteously solicited. If the Examiner has any questions regarding this Response, Applicants respectfully request that the Examiner contact the undersigned.

The Commissioner is hereby authorized to charge deposit account 02-1818 for any fees which are due and owing.

Respectfully submitted,

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Dated: January 24, 2008